

EXHIBIT D

HONEYWELL ABBREVIATION & ACRONYM DICTIONARY

- = Honeywell term
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A

AAIB - Air Accident Investigation Branch: British equivalent of NTSB
a/c - aircraft
AC - Advisory Circular
all - airline
ACARS - Aircraft Communications Addressing and Reporting System
ACAS - Aircraft Collision Avoidance System
AD - Airworthiness Directive: FAA regulatory notice
A/D - Analog-to-Digital
Ada - A higher order programming language developed during the 1970s for the DOD (note: not an acronym, named for first computer programmer, Ada Augusta Byron)
ADC - Air Data Computer
ADF - Automatic Direction Finder: a navigation receiver
ADI - Attitude Director Indicator
ADIRS - Air Data Inertial Reference System*
ADIRU - Air Data Inertial Reference Unit*
ADM - Air Data Module
ADR - Air Data Reference
ADS - Air Data System
ADS - Automatic Dependent Surveillance: a potential feature for a/c position reporting, e.g., via SATCOM
ADS-B - ADS-Broadcast
ADT - Air Data Tester
AEEC - Airlines Electronic Engineering Committee
AES - Aircraft Earth Station
AFCS - Automatic Flight Control System
AFIS - Airborne Flight Information Service
AFMS - Advanced Flight Management System*
AFS - Auto Flight System: MD-11, integrates autopilot, CAT II flight director and autothrottle functions*
AGL - above ground level
AHRS - Attitude-Heading Reference System
AHS - American Helicopter Association
AIA - Aerospace Industries Association
AIAA - American Institute of Aeronautics and Astronautics
AIM - Airman's Information Manual
AIMS - Airplane Information Management System (Boeing 777)
ALPA - Airline Pilots Association
ALT - altitude
ALTN - alternate (airport)
AM - Amplitude Modulation
AMC - Avionics Maintenance Conference
AMD - Advisory Map Display*
AMI - Airline Modifiable Information*
AMLCD - Active Matrix Liquid Crystal Display

AMOSS - Airline Maintenance and Operation Support System

AMSS - Aeronautical Mobile Satellite Service

ANSI - American National Standards Institute

ANSIR - Advanced Navigation System Inertial Reference*

ANP - Actual Navigation Performance

AOA - angle-of-attack

AOG - Aircraft-On-Ground

AOPA - Aircraft Owners and Pilots Association

A/P - Autopilot

APU - Auxiliary Power Unit

ARINC - Aeronautical Radio, Incorporated: a nonprofit corporation owned by member airlines to define form, fit and function of avionics equipment

ARNIC 429 - standard for broadcast digital information transet systems for general applications

ARNIC 561 - Inertial navigation system specifications

ARNIC 571 - Inertial sensor attitude-heading reference system specifications

ARNIC 575 - Digital air data system specifications

ARNIC 700-series - All-digital equipment specifications for new-generation transport category aircraft

ARSA - Airport Radar Service Area

ASC - Aircraft System Controllers: MD-11, computers and control panels which automate many of the flight engineer control/monitoring functions from the DC-10

ASCB - Avionics Standard Communication Bus

ASCII - American Standard for Information Exchange

ASE - Airline-Selected Equipment*: vs. SFE; see also, BFE

ASI - Airspeed Indicator

ASIC - Application-Specific Integrated Circuit

ASL - above sea level

***A-SMGCS** - Advanced Surface Movement Guidance and Control System (Airport Systems)

ASME - American Society of Mechanical Engineers

ASRS - Aviation Safety Reporting System

A/T - autothrottle

ATA - Air Transport Association

ATC - air traffic control

ATCRBS - Air Traffic Control Radar Beacon System

ATE - Automatic Test Equipment: e.g., the STS-1000

ATI - Air Transport Indicator: standard case sizes ranging nominally from 2ATI - 6ATI

ATLAS - Abbreviated Test Language for Avionics Systems

ATM - Air Traffic Management

ATN - Aeronautical Telecommunications Network

ATR - Air Transport Radio: ARINC form-factor/standard case dimensions; 1 ATR = 8 MCU (also, Austin Trumbull Radio standard design)

ATS - Air Traffic Services

ATS - Air Transport Systems*

AUSRIRE - All Union Scientific Research Institute of Radio Equipment: CIS (former Soviet) agency

AWLU - Aircraft Wireless LAN Unit

AZ - azimuth: angular measurement in horizontal plane

B

BAe - British Aerospace

BCA - Boeing Commercial Airplanes

BCAS - Business and Commuter Aviation Systems*

- Beacon Collision Avoidance System: forerunner of TCAS

BEA - Bureau d'Enquetes Accidents: French equivalent of NTSB

BFE - Buyer-Furnished Equipment: not supplied as standard equipment by airframe mfgr; selected by customer (see ASE)

BIT - Built-in Test

BITE - Built-in Test Equipment

BPS - Bits Per Second

B-NAV - Basic Area Navigation: concept of easing congestion in European airways by requiring aircraft to be fitted with equipment that will allow more direct routings by ATC

C

CAA - Civil Aviation Authority (U.K. and other countries)

CAB - Civil Aeronautics Board

CAD/CAM - Computer Aided Design/Computer Aided Manufacture

CADC - Central Air Data Computer: an analog system

CAS - Calibrated Airspeed

- Commercial Aviation Systems*

CAS-SPO - Commercial Aviation Systems-Sensor Products Operation*

CAT - clear air turbulence: high altitude turbulence encountered where no clouds are present, (but coffee usually is.)

CAT I - Category I flight conditions: allows operation down to a 200 ft. decision height (DH) and with runway visual range not less than 2600 ft.

CAT II - Category II flight conditions: procedure which provides for approach to height above touchdown not less than 100 ft., runway visual range not less than 1200 ft.

CAT IIIA - Category IIIA flight conditions: no decision height minimum, runway visual range not ss than 700 ft.

CAT IIIB - Category IIIB flight conditions: no decision height minimum, runway visual range not less than 150 ft.

CCA - Circuit Card Assembly

CDI - Course Deviation Indicator

CD-ROM - Compact Disc-Read Only Memory

CDS - Common Display System*

CDU - Control-Display Unit: part of FMS

CFDS - Centralized Fault Display System (MD-11)*

CFIT - Controlled Flight Into Terrain

CG - Center of Gravity

CMC - Central Maintenance Computer

CMOS - Complementary Metal Oxide Semiconductor

CMU - Communications Management Unit

CNS/ATM - Communication, Navigation, Surveillance/Air Traffic Management (supersedes "FANS" terminology)

COTS - Commercial Off-The-Shelf

CPA - Closest Point of Approach (TCAS)

C/PDLC - Controller/Pilot Data Link Communications

CRM - Cockpit Resource Management or Crew Resource Management (the latter term has tended to displace former, recognizing a broader scope of the concept)

CRT - Cathode Ray Tube: display unit

CTO - Central Technical Operations*

CVR - Cockpit Voice Recorder

D

D/A - Digital-to-Analog Conversion

DAC - Douglas Aircraft Company (unit of McDonnell Douglas)

DADC - Digital Air Data Computer

DASA - Deutsche Aerospace (German aerospace organization)

dB - decibel: acoustic measurement unit

DDRMI - Digital Distance Radio Magnetic Indicator*

DEU - Display Electronics Unit

DFDAU - Digital Flight Data Acquisition Unit

DFDR - Digital Flight Data Recorder

DFGC - Digital Flight Guidance Computer*

DFGS - Digital Flight Guidance System*

DG - Directional Gyro

DGAC - Direction Generale de l'Aviation Civile -- French certifying authority, equivalent of FAA

DGPS - Differential GPS

DH - Decision Height

DME - Distance Measuring Equipment

DO - Dornier

DOT - Department of Transportation (U.S.)

DR - deduced reckoning

DRAM - Dynamic Random Access Memory

DU - Display Unit

DUATS - Direct User Access Terminal System

E

EADI - Electronic Attitude Direction Indicator (see ADI)

EBDBDBD - "That's All Folks"

EEPROM - Electrically Erasable Programmable Read-Only Memory

EFIS - Electronic Flight Instrument System

EHSI - Electronic Horizontal Situation Indicator (see HSI)

EIA - Electronic Industries Association

EICAS - Engine Indication and Crew Alerting System

EIS - Electronic Instrument System (MD-11)*

ELF/FL - Elevator Load Feel/Flap Limiter

ELS - Electronic Library System*

EMI - Electromagnetic Interference

EPR - Engine Pressure Ratio

EPROM - Erasable Programmable Read-Only Memory

EPRT - Engine Pressure Ratio Transmitter

EROPS - Extended Range Operations

ETA - Estimated Time of Arrival

ETE - Estimated Time Enroute

ETP - Equal Time Point: halfway there, by time

ETOPS - Extended Twin-engine Operations

F

FAA - Federal Aviation Administration (U.S.)

FADEC - Full Authority Digital Engine (or, Electronic) Control

FAMIS - Full Aircraft Management/Inertial System*: FMS/IRS upgrade package for widebodies -- no longer offered

FANS - Future Air Navigation System (ICAO-endorsed worldwide navigation plan -- the term "CNS/ATM" is now preferred)

FAR - Federal Aviation Regulations

FBO - Fixed-Base Operator

FBL - Fly-by-light

FBW - Fly-by-wire

FBN - Fly-by-night

FCC - Federal Communications Commission (U.S.)

-Flight Control Computer

FCS - Flight Control System

FD - Flight Director

FDAU - Flight Data Acquisition Unit

FDMU - Flight Data Management Unit: FAMIS component

FDR - Flight Data Recorder

FGS - Flight Guidance System

FL - Flight Level: measured in hundreds of ft. (above 18,000 ft.)

FLIR - Forward Looking Infra-Red (radar)

FM - Frequency Modulation

FMC - Flight Management Computer

FMCDU - Flight Management Control and Display Unit (FMS)

FMCS - Flight Management Computer System

FMGC - Flight Management Guidance Computer

FMGEC - Flight Management Guidance Envelope Computer

FMS - Flight Management System

F/O - First Officer

FOD - Foreign Object Damage

FOG - Fiber Optic Gyro (see IFOG)

FQIS - Fuel Quantity Indicating System*

FSC - Fuel System Controller

FT/ADIRS - Fault Tolerant/Air Data Inertial Reference System* (777)

G

GA - general aviation: aviation operations other than military and airlines (e.g., corporate, agricultural, personal, flying clubs/schools)

GATM - Global Air Traffic Management (military version of CNS-ATM concept)

GATT - General Agreement on Trade and Tariffs
GBST - Ground-Based Software Tool
GCP - Glareshield Control Panel
GDAP - Growing Danger of Acronym Proliferation
GES - Ground Earth Station (SATCOM term)
GIE - Groupement d'Intérêt Economique: French corporate entity, grouping of mutual economic interests (e.g. Airbus)
GLONASS - Global Orbiting Navigation Satellite System: CIS satellite navigation system version of GPS
GLS - GPS Landing System
GLU - GPS Landing Unit: provides precision of GPS guidance to the runway in Cat III operations
GMT - Greenwich Mean Time: used in navigation systems; Zulu
GNS - Global Navigation System (like GPS, but broader -- now the preferred term by Honeywell)
GNSS - Global Navigation Satellite System
GNSSU - Global Navigation Satellite Sensor Unit (the GNS receiver component of a GNS)*
GO/NG - Go/No Go
GPIRS - Global Positioning/Inertial Reference System*
GPS - Global Positioning System (see GNS)
GPSSU - Global Positioning System Sensor Unit*
GPWS - Ground Proximity Warning System
GS - Groundspeed
G/S - Glide Slope

H

HAI - Helicopter Association International
HERF - High-Energy Radio Frequency or High-Energy Radiated Fields: dense electromagnetic fields created by radio/TV transmitters -- possible source of interference for electronic instruments
HF - High Frequency: 3-30 MHz
HFDL - High Frequency Data Link
HIRF - High Intensity Radiated electromagnetic Frequencies (see also, HERF)
HMCDU - Hybrid Multifunction Control-Display Unit: (757/767)*
HPA - High Power Amplifier - SATCOM component
HSI - Horizontal Situation Indicator
HUD - Head-up Display
HW - hardware
Hz - Hertz: cycles per second

I

IAC - Integrated Avionics Computer*
IAS - Indicated Airspeed
IATA - International Air Transport Association: economic association of commercial airlines
ICAO - International Civil Aviation Organization: agency of the UN
IDENT - Identification

IEEE - Institute of Electrical and Electronics Engineers
IFALPA - International Federation of Airline Pilots Association
IFE - In-flight entertainment
IFOG - Interferometric Fiber Optic Gyro (see FOG)
IFR - Instrument Flight Rules: see IMC
II - Ilyushin Design Bureau
ILS - Instrument Landing System
IM - Inner Marker (glideslope)
IMA - Integrated Modular Avionics (see AIMS)
IMC - Instrument Meteorological Conditions (see IFR)
Inmarsat - International Maritime Satellite Organization -- international cooperative of more than 50 countries that operates a global system of satellites for mobile communications, such as SATCOM.
INS - Inertial Navigation System
I/O - Input/Output
IPTN - Industri Pesawat Terbang Nusantara -- Indonesia's state-owned aerospace manufacturer
IR - Infrared
IRS - Inertial Reference System
IRU - Inertial Reference Unit: part of IRS
ISA - Inertial Sensor Assembly - part of IRS
-International Standard Atmosphere
ISDU - Inertial System Display Unit
ISO - International Standards Organization
IVSI - Instantaneous Vertical Speed Indicator

J

JAA - (European) Joint Airworthiness Authority -- founded in 1970 to develop unified European approach to aviation safety; represents 27 European countries. (See also, JAR.)
JAR - Joint Airworthiness Requirement -- issued by JAA

K

K - thousand
KHz - KiloHertz
KIAS - Indicated Airspeed in Knots
KT - Knots: nautical miles/hour

L

LAAS - Local Area Augmentation System
LADGPS - Local area differential GPS
LAN - Local Area Network
LASER - Light Amplification by Stimulated Emission of Radiation
LAT - latitude

LCD - Liquid Crystal Display

LED - Light-Emitting Diode

LEO - Low Earth Orbit

LIDAR - Light Detection and Ranging

LIP - Limited Installation Program (e.g. TCAS)

LLWAS - Low-Level Wind Shear Alert System

LNAV - Lateral Navigation

LOC - Localizer: part of Instrument Landing System

LORAN - Long-Range Navigation: electronic pulse system for oceanic navigation

Loran-C - a hyperbolic grid navigation system

LRU - Line-Replaceable Unit

LRM - Line-Replaceable Module

LSAS - Longitudinal Stability Augmentation System (MD-11)

LSI - Large Scale Integration

LSRRTI - Leningrad Scientific Research Radio Technical Institute: Soviet agency

LSS - Lightning Sensor System*

M

mb - millibars

M - Mach number: speed of a/c expressed in relation to speed of sound

M - million; mega

MAC - Mean Aerodynamic Chord

MASI - Mach Airspeed Indicator

MAPPER - Maintaining, Preparing & Producing Executive Reports*

MAU - Modular Avionics Unit*

MCA - Ministry of Civil Aviation (former USSR)

MCDU - Multifunction Control and Display Unit: part of FMS

MCP - Mode Control Panel

MCU - Modular Concept Unit (Spitzer); also defined as Minimum Configuration Unit (BCA Magazine); also, Modular Component Unit

MD - McDonnell Douglas (no hyphen)

MDAU - Maintenance Data Acquisition Unit

MEO - Medium Earth Orbit (satellite)

MFD - Multi-Function Display

MHRS - Magnetic Heading Reference System

MHz - MegaHertz: a whole lot of Hertz

MLS - Microwave Landing System

MM - Middle Marker (glideslope)

MMR - Multi-Mode receiver

MNPS - Minimum Navigation Performance Specifications

MOPS - Minimum Operation and Performance Standards/Minimum Operational Performance Standards

MOU - Memorandum of Understanding (pl: Memoranda)

MRI - Ministry of Radio Industry (USSR)

MSL - Mean Sea Level (datum for altitude measurement)

MSU - Mode Select Unit

MTBF - Mean Time Between Failures

MTBR - Mean Time Between Removals

MTBUR - Mean Time Between Unscheduled Removal

MTU - Motoren-und Turbinen Union Ludwigsfelde GMBH (German engine manufacturer)

N

N1 - Engine low pressure rotor speed

NAS - National Airspace System

NASA - National Aeronautics and Space Administration (U.S.)

NAT - North Atlantic Tracks

NAV - navigation

NAVAID - Navigational Aid

NAVSAT - navigation satellite

NBAA - National Business Aviation Association

NCD - No Computed Data

ND - Navigation Display

NDB - Nondirectional Beacon

-Nav Data Base

NIH - Not Invented Here

NM - Nautical Mile: 1.15 statute miles or 1000 fathoms or 216,000 barleycorns; 60 nm = 1 degree of Earth's circumference

NMS - Navigation Management System

NMU - Navigation Management Unit

NOAA - National Oceanic and Atmospheric Administration

NOTAM - Notice to Airmen

NPRM - Notice of Proposed Rule-Making (FAA)

NTSB - National Transportation Safety Board (U.S.)

NWS - National Weather Service (U.S.)

O

OAT - Outside Air Temperature

OEM - Original Equipment Manufacturer

OM - Outer Marker (glideslope)

OMS - On-Board Maintenance System

ORT - Owner Requirements Table

P

PFD - Primary Flight Display

PIP - Product Improvement Program*

PIREP - Pilot Report

PMAT - Portable Maintenance Access Terminal

PMO - Program Management Organization*

PMS - Performance Management System*

PRF - Pulse Repetition Frequency: pertaining to radar

PROM - Programmable Read-Only Memory

Ps - Pressure, static: air data measurement

psi - pounds/square inch

Pt - Pressure, total: air data measurement

PWB - Printed wire board

Q

QFE - field elevation pressure

QNH - sea level pressure

R

RA - Radio Altitude

- Resolution Advisory (TCAS)

RAA - Regional Airline Association

RADAR - Radio Detection And Ranging

RAE - Royal Aircraft Establishment (Farnborough)

RAIM - Receiver autonomous Integrity Monitoring (GPS)

RAM - Random Access Memory

RDDMI - Radio Digital Distance Magnetic Indicator*

RDI - Radio Direction Indicator

REACT - Rain Echo Attenuation Compensation Technique: Honeywell weather radar feature*

RF - radio frequency

RFI - Request For Information

RFP - Request For Proposal

RFQ - Request For Quotation

RFU - Radio Frequency Unit - SATCOM component

RHF - Ridiculously High Frequency

RISC - Reduced Instruction Set Computer

RLD - Rijks Luchtvaart Dienst: Dutch equivalent of FAA

RLG - Ring Laser Gyro

RMI - Radio Magnetic Indicator

RMU - Radio Management Unit

RNAV - Area Navigation

RNP - Required Navigation Performance

ROM - Read-Only Memory

RPK - Revenue Passenger-Kilometers: number of revenue passengers carried times distance in KMs

RPM - Revenue Passenger-Miles (see RPK)

RPZ - Ramensky Priborostroitelny Zavod (Russian avionics manufacturer)

R/T - Receiver/Transmitter

RTA - Required Time of Arrival

RTCA - a private, not-for-profit organization that brings industry and government together to address the needs of the worldwide aeronautical community. The acronym RTCA originally stood for Radio Technical Commission for Aeronautics-- but is now known simply as RTCA

RVR - Runway Visual Range

RVMS - Reduced Vertical Separation Minimums

S

SA - Selective Availability -- re GPS

SAARU - Secondary Attitude/Air data Reference Unit* (777)

SAE - Society of Automotive Engineers

SAFEBUStm - Honeywell-developed ARINC 659 cabinet bus (777)

SAIFIR - Systems Aid for Integration and Fault Reporting (777)

SAMPE - Society for the Advancement of Material and Process Equipment

SAR - Search and Rescue: usually pertaining to weather radars and navigation (BCAS)

- Some Assembly Required (Sears)

SARPS - Standard and Recommended Practices

SAT - Static Air Temperature

SATCOM - Satellite Communications

SC - Special Committee (RTCA term)

SDU - Satellite Data Unit: SATCOM component

SFE - Seller-Furnished Equipment: i.e., selected by airframe manufacturer as standard for that aircraft type

SID - Standard Instrument Departure

SIGMET - Significant Meteorological Advisory

SITA - Societi Internationale de Tilicommunications Aeronautiques: cooperative, not-for-profit organization with 400 member companies dedicated to the air transport industry. Operates world's largest specialized data telecommunications network including VHF AIRCOM Service which provides air-ground communications network of ground stations.

SITS - Subsystem Integration and Test Station

SLS - Satellite Landing System*

SMART - Standard Modular Avionics Repair and Test

SMT - Surface-Mount Technology

SRC - Systems and Research Center*

STAR - Standard Terminal Arrival Route

STC - Supplemental Type Certificate: FAA certification document

STOL - Short Take-Off and Landing

SW - software

T

TA - Traffic Advisory (TCAS)

***TAIS** - Total Aircraft Information System (Aviation Services)

***TAMS** - Total Airport Management System (Airport Systems)

TAS - True Airspeed

TAT - Total Air Temperature

TBD - To Be Determined

TCA - Terminal Control Area

TCAS - Traffic Alert and Collision Avoidance System

***TEMPLE** - Terminal Management and Planning Equipment

TERPS - Terminal Instrument Procedures

TO/GA - Take Off/Go Around: operating mode

TRACON - Terminal Radar Approach Control

TSO - Technical Standard Order: performance specification and production compliance document issued by FAA

TTG - Time To Go
TTS - Time To Station
TTW - Time to Waypoint
Tu - Tupolev Design Bureau
TURB - Turbulence
TWDL - Two-way Data Link

U

UDF - Unducted Fan
UHF - Ultra High Frequency: 300-3000 MHz

V

V/STOL - Vertical/Short Takeoff and Landing
V1 - takeoff decision speed
V2 - minimum takeoff safety speed at 35'
VAC - Volts, Alternating Current
VALFAC - Validation Facility: avionics test and simulation facility*
VASI - Visual Approach Slope Indicator
VDC - Volts, Direct Current
VDGS - Visual Docking Guidance System (Airport Systems)
VDL - VHF Data Link
VDR - VHF Data Radio
VFE - maximum flap extended speed
VFR - Visual Flight Rules (see VMC)
VG/DG - Vertical Gyro/Directional Gyro
VG - Vertical Gyro
VHF - Very High Frequency: 30-300 MHz -- "straight-line" signal used for communications and navigation
VHSIC - Very High Speed Integrated Circuit
VIA - Versatile Integrated Avionics -- offshoot of Integrated Modular Avionics
VLF - Very Low Frequency: 3 KHz-30 KHz -- used for long range navigation in combination with Omega
VLSIC - Very Large Scale Integrated Circuit
VMC - Visual Meteorological Conditions (see VFR)
VNAV - Vertical Navigation
VNE - never-exceed speed
VNO - maximum structural cruising speed
VOR - VHF Omnidirectional Range
VORTAC - Combined VOR and Tacan system
VR - rotation speed
VREF - approach reference speed
VSI - Vertical Speed Indicator
VSI/TRA - Vertical Speed Indicator/Traffic, Resolution Advisory

W

WAAS - Wide area augmentation system

WBS - Weight and Balance System*

WORM - Write-Once/Read Many: optical disk technology

WPT - waypoint

WS - Windshear*

WX - Weather

WXR - Weather Radar

X

XPDR - Transponder

X/WIND – crosswind

Y

Z

Z - zillion: 1 X 10z or 10 jillion

- unit of sleep